**TITLE:** **Instructions for Posting of Experiment Authorization Form / Experiment Hazard Control Plan**

**CATEGORY:** **Operations**

**AUTHORED BY:** **B. Glagola, 05/28/2003 (revised by UES Staff, 05/05/2006)**

**REVIEWED BY:** **K. Beyer, 05/08/2006**

**REVIEW PERIOD:** **Annually**

**Purpose:** This document provides instructions for Floor Coordinators and APS MCR Personnel on how to post an Experiment Hazard Control Plan and Experiment Authorization for user experiments at the APS.

When a User wants to post a new experiment the Floor Coordinator (FC) or MCR personnel (MCR) are to follow these steps:

1. Verify that the group is submitting a valid Experiment Authorization (EA) for and an Experiment Hazard Control Plan (EHCP) by checking the approval dates on the EA. EAs/EHCPs are valid for up to one year. If approval dates are invalid, inform the user that the experiment cannot be posted until it is reapproved by the Beamline and the APS. The user should contact the Beamline to initiate the process.

2. Ask the group if the plan matches the scope of the actual experiment.

3. The EHCP will contain a summary of the experiment. Confirm the following is listed:
    a. The samples/materials present for the experiment, noting if any material hazards are present
    b. The special equipment being used, if any
    c. The hazard classes that apply to the experiment
    d. The required safety items (review, procedures, training, etc.)
    e. The risk class (Low and Medium risk experiments require only a beamline controls verification signature, whereas a High risk experiment will have a separate line for designated APS Safety personnel to sign under verification.)
    f. The personnel participating in the experiment and that their training is current for the listed courses. Dates listed in bold are overdue and the user must take that training (see the Instructions for administering training). Recently completed training may not appear on the EHCP. In this case ask the user if they have just completed the training.

(See sample EHCP below.)

4. If there are hazards noted on the EHCP, the FC/MCR should inquire as to whether the proper secondary documentation (e.g. SOP, Laser Safety Audit Checklist, etc.) is present with the EHCP. If it is not, ask the user to print out the attached documents and post them in the work area.

5. Post the EHCP (with any attached documents) in the bottom right safety sleeve on the hutch door where the experiment is being conducted. (See Figure 1)

6. NOTE: If the EA has a "P" on the Pen # line this indicates that this is a proprietary experiment. The start and stop times are crucial on proprietary experiments as they are used to calculate the time used to charge (bill for payment) the group for beamtime. (see Sample EA below)

7. Verify that the On-Site Spokesperson (or designate) for the experiment has signed and dated the EA spokesperson section. If there is no signature obtain one from the listed user. (See sample EA below.)

8. Verify that the Beamline and the APS have approved the experiment. The experiment is approved if there is a name and a date listed for both the Beamline and the APS under Safety Review and Approval on the EA form.
    a. If the beamline has not approved the experiment inform the user that the experiment cannot be posted until it is approved. Have the user contact the Beamline staff.
    b. If APS has not approved the experiment inform the user and call a member of the APS Experiment Safety Review Board (ESRB) for instructions.

(See sample EA below.)

9. Verify that Beamline Personnel have checked on the EA form that they have given the most recent copy of the "APS User Safety Update" to the On-Site Spokesperson. If the box is not checked ask the user if they have received the update. If they have received it then check the box. If not print out a copy of the update and hand it to the users. The update is available at http://www.aps.anl.gov/Safety_and_Training/User_Safety_Updates/index.html (See sample EA below.)

10. Verify that Beamline Personnel have signed and dated the EA Safeguards Verification section. If there is no signature have the user contact Beamline personnel. (See sample EA below.)

11. If the experiment is in the "high risk" category there will also be a space for an APS Safeguards Verifier to sign and date the form. The name of the APS Safeguards Verifier should be listed on the form. Verify that this signature has been obtained. In the unlikely event that the experiment is "high risk" and is being posted off-hours and the signature(s) for the APS is not present then:

    a. If the hazard is radioactive, John Vacca / RSO-HP should be contacted. The signature line for the APS should read "John Vacca / RSO-HP"
    b. If there are other hazards contact the APS person listed or a member of the APS ESRB (a name or names should be listed). (names and numbers are listed below)

(See sample EA below.)

12. On the EA form write the date and time posted near the bottom. If the EA has a "P" on the Pen # line verify with the users the start time of the experiment and record on the EA. The start and stop times are crucial on proprietary experiments as they are used to calculate the time used to charge (bill for payment) the group for beamtime.

13. Make a copy of the EA form.

14. Post the EA form in the Beamline End Cabinet.

15. Remove the old EA. (Commissioning EA forms remain posted.)
    a. If the old EA does not have a "P" on the Pen # line leave it in the local FC mailbox.
    b. If the old EA has a "P" on the Pen # line ask the user specifically when the old EA was completed and write the end time and date on the EA and put it in the bin on the door of Nena Moonier's office 431 Z010.

16. Deliver the copy of the new EA to the bin on the door of Nena Moonier's office 431 Z010.

17. Floor Coordinators will document the posting by entering the Experiment ID in the Floor Coordinator Shift Log by using the **Post ESAF to Table** tool. MCR personnel are to e-mail the FC who will be on duty for the next shift the following information:

    a. PEN Number (listed on the top of the EA Form)
    b. Experiment ID (listed on the top of the EA Form)
    c. Date and Time of the "Start of the Experiment".

What to do if there are handwritten changes on the EHCP form:

1. Deliver a copy of the EHCP and its attached documentation to Nena Moonier, 431-Z010.
2. If non-hazardous samples are added which are within the original scope of the EA, then no additional APS approval is needed. Contact of member of the APS ESRB is you have any questions.
3. If hazardous samples or equipment are added, or the scope of the experiment changes, then a new approval is required. Obtain approval from a member of the APS ESRB (see list below)
4. If there are any questions about changes made to the EHCP, contact a member of the APS ESRB. (see list below).
5. If the change is only the addition or deletion of experimenters, send a copy of the modified list of experimenters (via paper or email) to Nena Moonier, nmoonier@aps.anl.gov

Additional items:

1. If there are no CCWPs (yellow sheets) or administrative restrictions (pink sheets) in the end cabinet, check that the hutch where the experiment takes place has been given APS Enable.
2. Whenever an experimental hutch is granted APS Enable, the Floor Coordinator is to record this change of status within the Floor Coordinator Shift Log. If a station must be given APS Enable by the MCR they are to contact the on-call Floor Coordinator before doing so.

## APS Experimental Safety Review Board/ APS ESRB

| Name | Work Phone | Pager | Cell Phone | Home Phone |
|---|---|---|---|---|
| Glagola, Bruce | 252-9797 | 4-9797 | 815-715-8991 | 815-436-0159 |
| Moonier, Nena | 252-8504 | 4-8504 | | 630-257-1247 |
| Chang, Elroy | 252-6714 | 4-1888 | | 630-679-1035 |
| position to be filled by new XSD ES&H Coordinator | | | | |


Figure 1: Experiment Hutch Safety Sleeve.

**Pen** 17-BMB-2006-160 **Experiment ID:** **36434**

**Title** IMCA 17-ID (2006.4)
Pfizer (MI) Protein Crystallography

**On-Site Spokesperson :**

| First Name | Last Name | Institution | Phone |
|---|---|---|---|
| Barry | Finzel | Pfizer Global Research and Development | 734 622 5385 |

## Materials Hazards (3a)

| Material | Quantity | Any | Tox | Biohaz | Flam | Rad | Carcin | Corro | Oxid | Disp.ANL | Lab Use |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Protein A | 8 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein B | 12 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein C | 4 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein D | 2 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein E | 8 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein F | 10 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein G | 1 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein H | 18 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein I | 2 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein J | 6 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein K | 4 crystals | N | N | N | N | N | N | N | N | N | N |
| Protein L | 0 crystals | N | N | N | N | N | N | N | N | N | N |

## Beamline Laboratory Use

## Equipment / Physical Hazards (3b)

**Experiment Description:**
Standard data collection of protein crystals.

## Hazard Classes That Apply (3c)

| Base | Cryo | High T | Laser | High P | Chem | BSL | Rad | Magnet | RF | NCE | High V | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ☑1.0 | ☐2.0 | ☐3.0 | ☐4.0 | ☐5.0 | ☐6.0 | ☐7.0 | ☐8.0 | ☐9.0 | ☐10.0 | ☐12.0 | ☐13.0 | ☐14.0 |
| | | ☐3.1 | ☐4.2 | ☐5.1 | ☐6.1 | ☐7.1 | ☐8.1 | | | | | |
| | | ☐3.2 | ☐4.3a | ☐5.2 | ☐6.2 | ☐7.2 | ☐8.2 | | | | | |
| | | ☐3.3 | ☐4.3b | ☐5.3 | ☐6.3 | ☐7.3 | ☐8.3 | | | | | |
| | | | ☐4.4 | ☐5.4 | ☐6.4 | ☐7.4 | | | | | | |
| | | | | | ☐6.5 | ☐7.5 | | | | | | |
| | | | | | ☐6.6 | | | | | | | |

## Experiment Safety Requirements Summary (3d)

**Pen** 17-BMB-2006-160
**Title** IMCA 17-ID (2006.4)
Pfizer (MI) Protein Crystallography

**Hazard Controls to be implemented**

**Engineered Controls**
(1.0) NONE

**Procedural Controls**
(1.0) NONE

**Design Reviews and Equipment Inspection**
(1.0) NONE

**PPE**
(1.0) NONE

**Signs and Labeling**
(1.0) NONE

**Dosimetry and Monitoring**
(1.0) NONE

**Safety Training**
(1.0) APS101, GERT, Sector Orientation

## Beamline Comments

**This experiment is Risk Class :** Low (3e)

## APS Experiment Review Board Comments

10-APR-06 — 51595 — Verify ESH223 and ESH377 training for the users.

## Experiment Personnel and Training Due Dates (3f)

| First Name | Last Name | Institution |
|---|---|---|
| Barry | Finzel | Pfizer Global Research and Development |

| GERT | APS101 | ESH100U | Sector | ESH223 | ESH377 |
|---|---|---|---|---|---|
| 03/23/2008 | 10/24/2007 | Taken on 10/25/2002 | 10/13/2006 | 03/24/2007 | 03/23/2008 |

ESH120 ESH700

---

| First Name | Last Name | Institution |
|---|---|---|
| Igor | Mochalkin | Pfizer Global Research and Development |

| GERT | APS101 | ESH100U | Sector | ESH223 | ESH377 |
|---|---|---|---|---|---|
| 12/16/2007 | 11/15/2008 | Taken on 11/17/2003 | 08/17/2007 | 12/16/2006 | 12/16/2007 |

(ESH120 displayed for Laser Experiments and ESH700 displayed for Radioactive Materials Experiments ONLY)

---

| First Name | Last Name | Institution |
|---|---|---|
| John | Knafels | Pfizer, Inc. |

| GERT | APS101 | ESH100U | Sector | ESH223 | ESH377 |
|---|---|---|---|---|---|
| 04/12/2008 | 06/16/2009 | Taken on 06/17/2004 | 02/09/2007 | 04/13/2007 | 04/12/2008 |

---

| First Name | Last Name | Institution |
|---|---|---|
| Patrick | McConnell | Pfizer Global Research and Development |

| GERT | APS101 | ESH100U | Sector | ESH223 | ESH377 |
|---|---|---|---|---|---|
| 12/02/2007 | 10/22/2008 | Taken on 10/24/2003 | 12/02/2007 | 04/13/2007 | 04/12/2008 |

---

# APS - Experiment Authorization Form SAMPLE

**PEN # :** 17-BMB-2006-160 **Experiment ID: 36434** **P**

**Title :** IMCA 17-ID (2006.4)
Pfizer (MI) Protein Crystallography

(6)

## On-Site Spokesperson :

**The information on this hazard control plan is accurate and complete. All materials/samples to be used and hazards have been identified. All users are listed.**

(7)

| First Name | Last Name | Institution | Local Phone | Signature | Date |
|---|---|---|---|---|---|
| Barry | Finzel | Pfizer Global Research and Development | | | |

**BM Start Date :** 04/13/2006

## Safety Review and Approval :

**The hazard control plan for this experiment has been reviewed and approved. A copy of the plan, which also describes the activities that have been reviewed and authorized, is posted on the experiment enclosure(s) and at other locations where work might be performed.**

| Beamline Management : | Date | APS : | Date |
|---|---|---|---|
| Kathleen Favale | 04/11/2006 | Nena Moonier | 04/10/2006 |

(8)

## Material Hazards

## Equipment Hazards

## Safeguards Verification :

**All required controls, training and safeguards are in place to start the experiment.**

☐ **The current "APS User Safety Update" has been provided to the On-site Spokesperson.** (9)
**The experiment's scope of work and Hazard Control Plan are consistent with requirements s**

| Organization | Name | Signature | Date | |
|---|---|---|---|---|
| **Beamline :** | IMCA-CAT Staff | | | (10) |
| APS: | | | | (11) |

(Note: The APS signature line only shows up for "high risk" experiments)